Attorney's Docket No. 5577-108

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Cox, et al.   Group Art Unit: 2155
Serial No.: 09/211,527   Examiner: F. Backer
Filed: December 14, 1998
For: METHODS, SYSTEMS AND COMPUTER PROGRAM RODUCTS FOR POLICY
        BASED NETWORK CONTROL OF CHARACTERISTICS OF USER SESSIONS

Date: January 31, 2002

BOX AF
Commissioner for Patents
Washington, DC 20231

TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION--37 C.F.R. § 1.192)

1.   Transmitted herewith, in triplicate, is the APPEAL BRIEF in this application, with
      respect to the Notice of Appeal filed on January 9, 2002.

2.   This application is filed on behalf of
      ☐   a small entity
      A verified statement ☐ is attached; ☐ was already filed.

3.   Pursuant to 37 C.F.R. § 1.17(c), the fee for filing the Appeal Brief is:
      ☐   small entity $160.00
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      ☒   The Director is hereby authorized to charge the above fees, or credit
           any overpayments, to Deposit Account No. **09-0461**

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           09-0461.

                              Respectfully submitted,

                              Timothy J. O'Sullivan
                              Registration No. 35,632

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Serial No.: 09/211,527
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Customer Number:

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Box AF, Commissioner For Patents, Washington, DC 20231, on January 24, 2002.

Traci A. Brown
Date of Signature: January 24, 2002

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PATENT

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APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. §1.192

Sir:

This Appeal is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" filed January 9, 2002.

Real Party In Interest

The real party in interest is assignee International Business Machines Corporation, Armonk, New York.

Related Appeals

Appellants are aware of no appeals or interferences that would be affected by the present appeal.

Status of Claims

Appellants appeal the final rejection of Claims 2, 7-13, 16, 21-27, 30, 35-41 and 43-45. The attached Appendix A presents the rejected Claims 2, 7-13, 16, 21-27, 30, 35-41 and 43-45, which are at issue on this appeal, as finally rejected in the Final Official Action of September 10, 2001 ("Final Official Action") and the Advisory Action of December 28, 2001 ("Advisory Action").

State of Amendments

All amendments in the present case have been entered.

Summary of the Invention

Embodiments of the present invention provide for the modification of content provided to a user of a networked device. The content provided to a user of a device is controlled by providing session dependent information to a network device that has stored policies. The stored policies on the network device are based on the session dependent information. The content provided by the network device to a networked device associated with the user and to the user is then automatically modified by the network device based on the policies and the provided session dependent information. *See* Specification, p. 12, line 7 to p. 8, line 7. Because many networkable devices, such as smartphones and the like, have limited memory and/or processing capabilities and because different network connections may have vastly different characteristics, the modification of content provided to the user's networked device is carried out at the network device that provides the content. Therefore, embodiments of the present invention provided for controlling content that is provided to the user's networked device by a network device through modification of the content provided to a user of the user's networked device based on policies and session dependent information. Accordingly, independent Claim 9 recites:

> 9.   (Amended)   A method of **controlling content provided to a device** of a user of a network, the method comprising:
> providing session dependent information associated with the device to a network device having stored policies which are based on the session dependent information; and
> automatically **modifying the content provided by the network device to the device** based on the policies and the provided session dependent information **so as to modify the content provided to the user of the device.**

Claim 9 (emphasis added). Similar recitations are found in independent Claims 23 and 37.

In further embodiments of the present invention, the session dependent content may include automatically translating content of a communication provided to the device associated with the user from a first language to a second language. Additionally, the content may be modified, for example, by removing color components of the content, removing graphics information to provide text-only content, prioritizing communications and/or varying preferences for an application. *See* Specification, p. 15, lines 22-30. The session dependent information may include, for example, the type of network connection, the type of

device connected to the network, the user identification of the user and/or an identification of an application executed by the user. See Specification, p. 11, line 24 to p. 12, line 1.

Issue

1. Are Claims 2, 7-13, 16, 21-27, 30, 35-41 and 43-45 properly rejected under 35 U.S.C. § 103 as obvious in light of United States Patent No. 5,835,726 to Shwed *et al.* (hereinafter "Shwed") and United States Patent No. 6,009,459 to Belfiore *et al.* (hereinafter "Belfiore").

Grouping of Claims

For purposes of this appeal, Claims 2, 7-13, 16, 21-27, 30, 35-41 and 43-45 are grouped together ("the Group I Claims"). However, the Group I claims do not stand or fall together as Claims 10, 24 and 38, Claims 11, 25 and 39, Claims 7,21 and 35, Claims 8, 22 and 36, Claims 12, 26 and 40 and Claims 43 through 45 are separately patentable.

Argument

I. INTRODUCTION

Claims 2, 7-13, 16, 21-27, 30, 35-41 and 43-45 remain pending in the present application. Of these claims, Claims 9, 23 and 37 are independent claims and the remaining claims all depend from one of Claims 9, 23 and 37, either directly or through intervening claims. These claims all stand rejected under 35 U.S.C. § 103 as obvious in light of the combination of Shwed in view of Belfiore.

To establish a *prima facie* case of obviousness, the Patent Office must satisfy three requirements. First, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. *See In re Wilson* 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970) ("All words in a claim must be considered in judging the patentability of that claim against the prior art"). Second, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *In re Oetiker,* 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992); *In re Fine*, 837 F.2d at 1074; *In re Skinner*, 2 U.S.P.Q.2d 1788, 1790 (Bd. Pat. App. & Int. 1986). Third, the proposed modification or combination of the prior art must have a

reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *See Amgen, Inc. v. Chugai Pharm. Co.*, 927 F2d 1200, 1209, 18 U.S.P.Q.2d 1016, 1023 (Fed. Cir. 1991).

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure. *See* M.P.E.P. § 2143. Moreover, to support combining references in a Section 103 rejection, evidence of a suggestion, teaching, or motivation to combine must be clear and particular, and this requirement is not met by merely offering broad, conclusory statements about teachings of references. *See In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999).

Finally, as discussed in M.P.E.P. 706.02(j), it is important that the basis for a rejection be communicated properly so that an applicant is given a fair opportunity to respond to the rejection. Furthermore, it is also important that the written record be clear as to the rationale behind decisions made during the prosecution of a patent. M.P.E.P. 706.02(j). Such is the case because the rational behind decisions in a case may affect the claim scope of an issued patent and, absent a clear explanation of how references are applied in a particular case, the applicant will not be provided a fair opportunity to address or rebut the rationale of the examiner.

II.   THE CLAIMS ARE PATENTABLE OVER SHWED AND BELFIORE

A.   The Shwed Reference

The Shwed reference describes a security system which selectively modifies packets in a network to provide security for private networks from outside attacks. *See* Shwed, Abstract. The specific types of modifications made to the packets include encryption, decryption, signature generation, signature verification or address translation. *See* Shwed, Abstract. Thus, Shwed relates to techniques for producing a Virtual Private Network (VPN). *See* Shwed, Abstract. Shwed describes the use of security rules to filter and/or modify packets for security purposes. *See* Shwed, col. 3, lines 8-29.

B.   The Belfiore Reference

The Belfiore reference describes an intelligent search method in a distributed computing environment. *See* Belfiore, Abstract. The system of Belfiore takes text entered by a user and, if a Universal Resource Locator (URL) cannot be constructed from the text,

formulates a search based on the entered text. *See* Belfiore, col. 2, lines 12-21. The formulated search is submitted to a search engine and the results provided to a web browser. *See* Belfiore, col. 2, lines 22-28. The results may also have text in them that corresponds to the text of the search highlighted by the web browser. *See* Belfiore, col. 2, lines 29-34. The highlighting of the text corresponding to the search, however, is carried out at the client computer that originated the search (*i.e.* the client computer). *See* Belfiore, col. 7, lines 22-35.

C.   The Independent Claims Are Patentable Over Shwed and Belfiore

Turning now to the specifics of the rejections, Claim 9 provides an example of the recitations of the pending independent claims. In particular, Claim 9 states:

> 9.   (Amended)   A method of **controlling content provided to a device** of a user of a network, the method comprising:
> providing session dependent information associated with the device to a network device having stored policies which are based on the session dependent information; and
> automatically **modifying the content provided by the network device to the device** based on the policies and the provided session dependent information **so as to modify the content provided to the user of the device**.

(emphasis added). Similar recitations are found in independent Claims 23 and 37. As is clear from the highlighted portions of Claim 9, the present invention provides for the network device that modifies the content provided to a device so as to modify the content provided to a user of the device. Thus, the content provided to the device of the user is controlled. This content modification must occur at a device other than the device of the user and be based on the stored policies and the session dependent information. Otherwise, the content **provided to** the device of the user would **not** be controlled.

In contrast to the content modification of the present invention, Shwed describes formatting of packets, for example, to encrypt, decrypt or digitally sign the data packets, irrespective of the actual content provided by the data packets. *See* Shwed, Abstract. Shwed does not alter the content provided to a user based on session dependent information but, at most, modifies the format of data packets provided to a user's device.

The Final Official Action acknowledges that Shwed fails to teach modifying the content provided to the device of the user so as to modify the content provided to the user of the device but asserts that Belfiore provides such a teaching. Final Official Action, p. 3. As

discussed above, Belfiore relates to automatic searching for resources in a distributed environment. *See* Belfiore, Abstract. Applicants submit that neither Belfiore nor Shwed, either alone or in combination, disclose each of the recitations of the independent claims. Furthermore, Belfiore may not be properly combined with Shwed to result in the recitations of Claims 9, 23 and/or 37.

Neither Belfiore nor Shwed disclose or suggest "modifying the content provided by the network device to the device based on the policies and the provided session dependent information so as to modify the content provided to the user of the device" as recited in the independent claims. The Final Official Action cites to the abstract, Figure 8B, column 7 lines 6-35 and Claims 14 and 42 of Belfiore for such a teaching. (Final Action, p. 3). However, the abstract of Belfiore describes a web search tool that either retrieves a URL entered by a user or creates a search based on the URL if no website is found corresponding to the URL entered by the user. Belfiore, Abstract. There is no mention of modifying content provided by a network device based on session dependent information or policies of the network device. All of the actions described in the abstract of Belfiore occur at the user device with the browser.

Similarly, in Belfiore, the only discussion of "content" being altered occurs at the client and is not based on policies of the network device or session dependent information. *See* Belfiore, Fig. 8 and discussion thereof. As is clear from the discussion in Col. 7 of Belfiore, the client opens the web page and may highlight search terms. Such is not modification of the content provided to the device by the network device as is recited in the claims. The altering of content described in Belfiore only occurs **at the client** and, therefore, does not disclose or suggest a network device modifying the content provided by the network device to the device of the user (client), as is recited in the claims. Accordingly, the cited combination of Shwed and Belfiore fail to disclose or suggest each of the recitations of independent Claims 9, 23 and 37.

Furthermore, Applicants submit that there would be no reason to combine the teachings of Shwed and Belfiore. The reasoning for such a combination asserted in the Final Official Action is that such a combination would be obvious because "this would have ensure that the user receive the particular content selected in the search session." Final Official Action, p. 3. However, it is unclear from the Final Official Action how, or why, the teachings of Shwed could or would be modified by the URL based search and/or retrieval of

Belfiore to result in the recitations of Claims 9, 23 and 37. Shwed describes formatting of packets, for example, to encrypt, decrypt or digitally sign the data packets, irrespective of the actual content provided by the data packets. This is unrelated to URL searches as described in Belfiore.

Shwed does not alter the content provided to a user based on session dependent information and, in fact, has no need to modify the content of the packets. At most, Shwed modifies the format of data packets provided to a user's device. Similarly, Belfiore has no need to modify the content of packets based on policies or session dependent information, as Belfiore only describes highlighting web content **after** it is **received** at the client. Thus, even if combined, Belfiore and Shwed would not result in the recitations of Claims 9, 23 and 37.

Furthermore, Shwed relates to firewall or network address translation operations, while Belfiore relates to web browser user interfaces. One of skill in the art would not look to the user interface art for solutions to the firewall/address translation problems of Shwed and, likewise, would not look to the firewall/address translation art to solve the user interface problems of Belfiore. As such, Shwed and Belfiore may not be properly combined and, therefore, the rejections should be reversed for at least these additional reasons.

Finally, neither Shwed nor Belfiore relate to the problem solved by the present invention, namely providing differing content to network attached devices in a heterogeneous network environment. As discussed above, Shwed relates to firewalls and Belfiore relates to a user interface for web browsing and searches. Neither of these references provide for modification of content provided to a device of a user and, thereby, the user, based on session dependent information. In fact, given the complexities of firewalls and virtual private networks (VPN's), one would think that a goal of Shwed would be to make the existence of encryption, digital signatures and/or network address translation transparent to a user. Accordingly, Applicants submit that Shwed and Belfiore are non-analogous to the present invention. As such, Applicants request reversal of the present rejections for at least these additional reasons.

In light of the above discussion, Applicants submit that independent Claims 9, 23 and 37 are not obvious in light of Shwed and Belfiore and request reversal of the present rejection. Applicants further submit that the remaining claims are patentable at least per the patentability of their base claims.

D.   Claims Depending from Claims 9, 23 and 37 are Separately Patentable

While each of the claims that depend from Claims 9, 23 and 37 are patentable as depending from a patentable base claims, certain of the dependent claims are separately patentable over Shwed and Belfiore. In Applicants' Amendment of July 10, 2001, Applicants discussed the patentability of several of the dependent claims. However, the Final Official Action of September 10, 2001, fails to even address Applicants' arguments. This is the case even though Applicants specifically requested clarification as to basis of the rejection of these dependent claims. The Final Official Action does not cite to Belfiore as teaching the recitations of the dependent claims but simply reiterates the previous rejections with no further explanation. As such, Applicants submit that the Final Official Action has failed to establish a prima facie case of obviousness as required by M.P.E.P. 706.02(j) and, therefore, further request reversal of the rejection of the dependent claims for this additional reason. Applicants further submit that certain dependent claims are separately patentable over Shwed and Belfiore for the additional reasons discussed below.

Claims 10, 24 and 38 each recite that the modification of the content comprises "automatically **translating content** of a communication provided to the device associated with the user **from a first language to a second language**." The Final Official Action completely ignores the recitations of these claims that the translation is from one language to another and merely states that Shwed teaches "automatically translating content of a communication provided to the device." Final Official Action, p. 3. There is no discussion in Shwed of translating from a first language to a second language. As discussed above, Shwed relates to firewalls. At most, Shwed describes network address translation. *See* Shwed, Abstract. Network address translation does not provide for translating content from one language to another as recited in Claims 10, 24 and 38. Thus, Shwed would have no reason to perform language translation on the content of data provided to a user. Accordingly, Applicants submit that Claims 10, 24 and 38 are separately patentable for at least these additional reasons.

Claims 11, 25 and 39 depend from Claims 10, 24 and 38 and, therefore, are separately patentable for the reasons discussed above. However, these claims also recite that the session dependent information from which the determination of whether to modify the content to translate from one language to another is "at least one of a type of network connection, a type of device connected to the network, a user identification of the user and an identification of

an application executed by the user." Shwed does not disclose or suggest basing such a language translation on one or more of: the network connection; the type of device; a user identification; and/or an identification of an application. As such, Applicants submit that Claim 11, 25 and 39 are separately patentable for at least these additional reasons.

Claims 7, 21 and 35 further recite that the policies for modification of content are stored on a second network accessible device and are obtained in response to the network device being provided the session dependent information. In contrast, the cited portion of Shwed does not describe policies that are stored on a second network device and used by a first network device or that the policies are obtained from the second network device **in response to the network device being provided the session dependent information**. *See* Shwed, col. 3, lines 8-35 and col. 14, line 40 to col. 15, line 42. In fact, Shwed expressly recites that "each firewall maintains a rule base that instructs the firewall how to handle both inbound and outbound communications between network objects." Shwed, col. 14, lines 62-65. Thus, Shwed expressly states that the rules are stored locally, not on a second network accessible device as recited in Claims 7, 21 and 35. Furthermore, because the rules are stored locally, there would be no reason to obtain them responsive to receiving the session dependent information. Accordingly, Applicants submit that Claims 7, 21 and 35 are separately patentable for at least these additional reasons.

Claims 8, 22 and 36 each recite that the second network accessible device is an on-demand server. No such disclosure is found in Shwed and the Final Official Action does not even address the recitations of these claims. Accordingly, Applicants submit that Claims 8, 22 and 36 are separately patentable for at least these additional reasons.

Claims 12, 26 and 40 each recite that "the policies comprise policies which control at least one of characteristics of a network connection, characteristics of content associated with a device utilized by the user, and preferences associated with an application utilized by a user." Shwed does not suggest using policies for the control of the items identified in these claims. Accordingly, Applicants submit that Claims 12, 26 and 40 are separately patentable for at least these additional reasons.

Claims 43 through 45 each recite that the content controlled is at least one of "removing color components of the content, removing graphics information to provide text-only content, prioritizing communications and varying preferences for an application." Applicants submit that such a modification of content is neither disclosed nor suggested by

the cited references. In particular, the cited portion of Shwed says nothing about any of the recitations of Claims 43 through 45, but only addresses firewall issues. *See* Final Action, p. 4. There is no discussion of color components, graphics, communication prioritization or application preferences. Accordingly, Applicants submit that Claims 43 through 45 are separately patentable over the cited references for at least these additional reasons.

In light of the above discussion, Applicants submit that the dependent claims are separately patentable over Shwed and Belfiore for at least these additional reasons. As such, Applicants request reversal of the rejections of the above referenced dependent claims for at least these additional reasons.

III. CONCLUSION

In light of the above discussion, Appellants submit that each of the rejected claims is patentable over the Shwed and Belfiore, either alone or in combination. Appellants, therefore, request reversal of the pending rejections and passage of the present application to issue.

Respectfully submitted,

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APPENDIX A

2.   A method according to Claim 9, wherein the session dependent information comprises at least one of a type of network connection, a type of device connected to the network, a user identification of the user and an identification of an application executed by the user.

7.   A method according to Claim 9, further comprising the steps of:
storing the policies on a second network accessible device; and
obtaining the policies from the second network accessible device in response to the network device being provided the session dependent information.

8.   A method according to Claim 7, wherein the second network accessible device is an on-demand server.

9.   A method of controlling content provided to a device of a user of a network, the method comprising:
providing session dependent information associated with the device to a network device having stored policies which are based on the session dependent information; and
automatically modifying the content provided by the network device to the device based on the policies and the provided session dependent information so as to modify the content provided to the user of the device.

10.   A method according to Claim 9, wherein the step of automatically modifying the content comprises the step of automatically translating content of a communication provided to the device associated with the user from a first language to a second language.

11.   A method according to Claim 10, wherein the session dependent information comprises at least one of a type of network connection, a type of device connected to the network, a user identification of the user and an identification of an application executed by the user.

12.   A method according to Claim 9, wherein the policies comprise policies which control at least one of characteristics of a network connection, characteristics of content associated with a device utilized by the user, and preferences associated with an application utilized by a user.

13.   A method according to Claim 12, wherein the content controlled by the policies is controlled based on at least one of a type of network connection, a type of device connected to the network, a user identification of the user and an identification of an application executed by the user.

16.   A system according to Claim 23, wherein the session dependent information comprises at least one of a type of network connection, a type of device connected to the network, a user identification of the user and an identification of an application executed by the user.

21.   A system according to Claim 23, further comprising:
means for storing the defined rules on a second network accessible device; and
means for obtaining the defined rules from the second network accessible device in response to the network device being provided the session dependent information.

22.   A system according to Claim 21, wherein the second network accessible device is an on-demand server.

23.   A system for controlling content provided to a device of a user of a network, comprising:
means for providing session dependent information associated with the device to a network device having stored policies which are based on the session dependent information; and
means for automatically modifying the content provided by the network device to the device based on the policies and the provided session dependent information so as to modify the content provided to the user of the device.

24.   A system according to Claim 23, wherein the means for automatically modifying the content comprises means for automatically translating content of a communication provided to the device associated with the user from a first language to a second language.

25.   A system according to Claim 24, wherein the session dependent information comprises at least one of a type of network connection, a type of device connected to the network, a user identification of the user and an identification of an application executed by the user.

26.   A system according to Claim 23, wherein the policies comprise policies which control at least one of characteristics of a network connection, characteristics of content associated with a device utilized by the user, and preferences associated with an application utilized by a user.

27.   A system according to Claim 26, wherein the content controlled by the policies is controlled based on at least one of a type of network connection, a type of device connected to the network, a user identification of the user and an identification of an application executed by the user.

30.   A computer program product according to Claim 37, wherein the session dependent information comprises at least one of a type of network connection, a type of device connected to the network, a user identification of the user and an identification of an application executed by the user.

35.   A computer program product according to Claim 29, further comprising:
computer readable program code which stores the defined rules on a second network accessible device; and
computer readable program code which obtains the defined rules from the second network accessible device in response to the network device being provided the session dependent information.

36.   A computer program product according to Claim 35, wherein the second network accessible device is an on-demand server.

37.   A computer program product for controlling content provided to a device of a user of a network, comprising:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer readable program code means comprising:

computer readable program code means for providing session dependent information associated with the device to a network device having stored policies which are based on the session dependent information; and

computer readable program code means for automatically modifying the content provided by the network device to the device based on the policies and the provided session dependent information so as to modify the content provided to the user of the device.

38.   A computer program product according to Claim 37, wherein computer readable program code which automatically modifies the content comprises computer readable code which automatically translates content of a communication provided to the device associated with the user from a first language to a second language.

39.   A computer program product according to Claim 38, wherein the session dependent information comprises at least one of a type of network connection, a type of device connected to the network, a user identification of the user and an identification of an application executed by the user.

40.   A computer program product according to Claim 37, wherein the policies comprise policies which control at least one of characteristics of a network connection, characteristics of content associated with a device utilized by the user, and preferences associated with an application utilized by a user.

41.   A computer program product according to Claim 40, wherein the content controlled by the policies is controlled based on at least one of a type of network connection,

a type of device connected to the network, a user identification of the user and an identification of an application executed by the user.

43.   A method according to Claim 9, wherein the step of automatically modifying content comprises at least one of removing color components of the content, removing graphics information to provide text-only content, prioritizing communications and varying preferences for an application.

44.   A system according to Claim 23, wherein the means for automatically modifying content comprises means for performing at least one of removing color components of the content, removing graphics information to provide text-only content, prioritizing communications and varying preferences for an application.

45.   A computer program product according to Claim 37, wherein the computer readable program code which automatically modifies content comprises computer readable program code which performs at least one of removing color components of the content, removing graphics information to provide text-only content, prioritizing communications and varying preferences for an application.